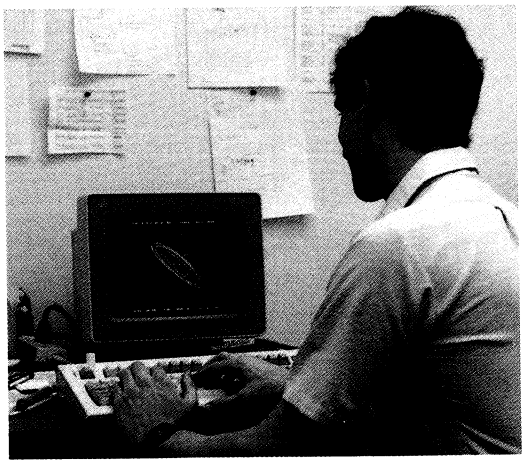
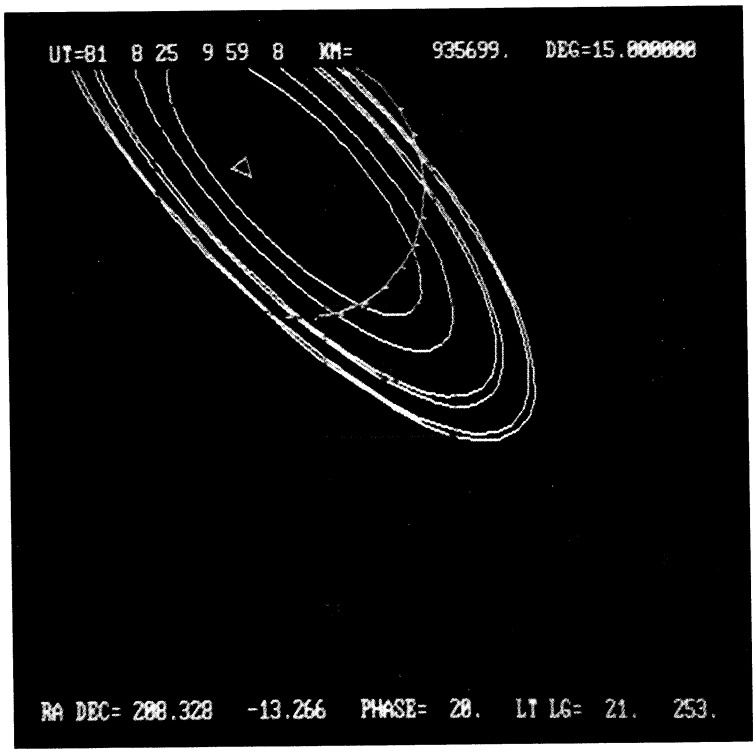
Space Software

In the mid-1980s, Jet Propulsion Laboratory (JPL) developed a computer program called MIP, for Multimission Interactive Picture Planner. It was designed as an aid in analyzing science and optical data collected on such missions as the Voyagers' grand tour of the solar system (1977-90) and the Giotto rendezvous with Comet Halley (1986).

Through an agreement with NASA, XonTech, Inc., Van Nuys, California is offering a commercial version of the program to the general public. Called XonVu (Zon-view), the software package simulates the missions of Voyager 1 at Jupiter and Saturn, Voyager 2 at Jupiter, Saturn, Uranus and Neptune, and Giotto in close encounter with Comet Halley.



At right above, John D. Callahan of XonTech, who designed the program when he was an astronomer at JPL, is checking out XonVu. The representation on the screen, shown in closeup below, is a simulation of Saturn, its rings and two of its moons, as viewed by Voyager 2 on its 1981 approach to the planet.



With the program, the user can generate scenes of the planets, moons, stars, or other solar system objects seen by the Voyagers, or Halley's nucleus and tail as seen by Giotto, all graphically reproduced with high accuracy in wireframe representation. The program takes the viewer along the actual paths flown by the Voyagers and Giotto; he cannot invent a new flight path. He can, however, zoom in on an object, rotate the field of vision, or change perspective; for example, it is possible to view a space scene from the perspective of the spacecraft, from Earth, or from a point in space that provides a view of both the spacecraft and its encounter target.

The program can be used on a wide range of computers, including PCs. User friendly and interactive, with many options, XonVu can be used by a space novice or a professional astronomer. With a companion user's manual, it sells for $79.